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**MUNICIPAL SEPARATE STORM
SEWER SYSTEM (MS4) PROGRAM
COMPLIANCE INSPECTION
(August 1–5, 2011)**

**STATE OF PENNSYLVANIA
DEPARTMENT OF TRANSPORTATION**

INSPECTION REPORT

**Report Date:
February 7, 2013**

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DOCUMENTS CITED IN THE REPORT

Short-name	Document Title and Date
Permit	<p><i>NPDES Permit No. PA I-1315-00-05-0001</i></p> <p><i>DEP Authorization to Discharge under the National Pollutant Discharge Elimination System (NPDES) Individual Statewide Permit for Discharges of Stormwater from Pennsylvania Department of Transportation (PennDOT) Roadway System in Urbanized Areas</i></p> <p>Effective May 27, 2005; expired May 27, 2010, and extended through July 14, 2011</p>
Renewal Permit	<p><i>NPDES Permit No. PA I-1315-00-05-0002</i></p> <p><i>DEP Authorization to Discharge under the National Pollutant Discharge Elimination System (NPDES) Individual Statewide Permit for Discharges of Stormwater from Pennsylvania Department of Transportation (PennDOT) Roadway System in Urbanized Areas</i></p> <p>Effective July 15, 2011</p>
PUB 73	<i>PennDOT Drainage Condition Survey Field Manual, April 2010</i>
DEP Permit No. PAG-02	<i>General NPDES Permit for Stormwater Discharges Associated with Construction Activities</i>
Drainage Manual	<i>PennDOT Drainage Manual, publication 584, 2010 edition</i>
PUB 113	<i>PennDOT Maintenance Foreman's Manual</i>
PUB 23	<i>PennDOT Maintenance Manual</i>

MAJOR ACRONYMS AND ABBREVIATIONS USED IN THE REPORT

Short Name	Corresponding Term
ACE	Assistant District Engineer-Construction (ACE)
ACMM	Assistant County Maintenance Manager
BOMO	Bureau of Maintenance and Operations
CFRP	Combined Facility Response Plan
EQAD BOPD	Environmental Quality Assurance Division, Bureau of Project Delivery
IDD&E	Illicit Discharge Detection and Elimination
O&M	Operation and Maintenance
PCSM Plan	Post-Construction Stormwater Management Plan
SEMP	Strategic Environmental Management Program
STAMPP	Systematic Techniques to Analyze and Manage Pennsylvania's Pavements

Introduction

On August 1–5, 2011, the U.S. Environmental Protection Agency (EPA), Region 3, and an EPA contractor, PG Environmental, LLC (hereinafter, collectively, the EPA Inspection Team) conducted an inspection of the Municipal Separate Storm Sewer System (MS4) Program of the State of Pennsylvania, Department of Transportation (hereinafter, PennDOT or Permittee). Discharges from the PennDOT MS4 are regulated under the State of Pennsylvania Department of Environmental Protection (DEP), Bureau of Watershed Management, *Authorization to Discharge under the National Pollutant Discharge Elimination System (NPDES) Individual Statewide Permit for Discharges of Stormwater from Pennsylvania Department of Transportation (PennDOT) Roadway System in Urbanized Areas* (NPDES Permit No. PA I-1315-00-05-0001; hereinafter, the Permit), effective May 27, 2005.

The Permit expired May 27, 2010, and was administratively extended by DEP through July 14, 2011. DEP issued a renewal Permit on July 15, 2011 (NPDES Permit No. PA I-1315-00-05-0002; hereinafter, the Renewal Permit). Because the Renewal Permit was issued only 16 days before the start of the EPA inspection, the EPA Inspection Team evaluated PennDOT's implementation of the requirements of the Permit, not the Renewal Permit.

Part B.5 of the Permit, "Definitions," defined *PennDOT MS4 System* as the "conveyance systems owned and/or operated by PennDOT which are designated or used for collecting or conveying stormwater associated with PennDOT roads, highways, bridges, and related structures." The Permit authorized PennDOT to discharge stormwater runoff and certain non-stormwater discharges from PennDOT's MS4 in urbanized areas, as defined by the 2000 U.S. Census, and other areas designated by DEP.

The PennDOT organization is divided into six main departments—Highway Administration, Safety Administration, Planning, Aviation and Rail Freight, Local and Area Transportation, and Administration. The Highway Administration Division is further divided into three main working groups—Design, Construction, and Maintenance. PennDOT has facilities (i.e., maintenance facilities and stockpiles) located in all 67 counties within the state and has established 11 engineering districts statewide. According to PennDOT's website, about 10,500 of PennDOT's 12,000 employees engage in roadway maintenance activities throughout the 11 engineering districts. PennDOT's roadway system comprises approximately 121,000 miles of state and local highways and 55,000 state and local bridges in Pennsylvania. PennDOT is directly responsible for the operation and maintenance of approximately 40,000 miles of highway and about 25,000 bridges.

The purpose of the inspection was to obtain information that will assist EPA in assessing PennDOT's compliance with the requirements of the Permit. The inspection schedule is presented in Appendix A.

Wet weather conditions were experienced during a portion of the inspection activities. Weather history reports¹ indicate that on August 1–2, 2011, a trace amount of precipitation fell in the Erie, Pa., area and approximately 0.62 inch of precipitation fell in the Harrisburg, Pa., area. On August 3–4, 2011, approximately 0.20 inch of precipitation fell in the Pittsburgh, Pa., area and approximately 1.68 inches of rain fell in the Hollidaysburg/Altoona, Pa., area.

The EPA Inspection Team obtained information through a series of interviews with representatives from PennDOT's Central Office and staff from PennDOT District Nos. 1, 2, 8, 9, and 11, along with a series of facility visits, record reviews, and field verification activities within the respective districts. The EPA Inspection Team conducted facility visits with PennDOT personnel from PennDOT's Central Office and/or the participating districts. The primary representatives involved in the inspection are listed in the tables below:

PennDOT Central Office and District No. 8: August 1–2, 2011	
State of Pennsylvania, Department of Transportation	Greg Buterbaugh, MS4 Permit Coordinator, Bureau of Maintenance and Operations (BOMO) Kirit Pandya, SEMP Manager District 8 Rick Dolbin, District 8 Maintenance Programs Manager Terry Snyder, District 8 Environmental Coordinator Lisa Myers, District 8 Project Manager/Regulatory Permits Coordinator Rich Roman, Assistant District Executive - Maintenance Dave Condo, Environmental Chemist 2 Ken Thornton, SEMP Chief Kenda Gardner, Office of Chief Counsel JR Palladino, District Civil Engineer
EPA Representatives	Andrew Dinsmore, EPA Region 3 Elizabeth Ottinger, EPA Region 3
EPA Contractors	Scott Coulson, PG Environmental, LLC Luz Slauter, PG Environmental, LLC

¹ Weather history reports for the listed Pennsylvania cities were obtained from the National Weather Service website (<http://www.weather.gov/climate/index.php?wfo=lsx>).

PennDOT District No. 1: August 1–2, 2011	
State of Pennsylvania, Department of Transportation	Darrell R. Chapman, ACMM 1-2 Doug Schofield, Maintenance Services Manager Dave Hellon, HEM II Ken Thornton, SEMP Chief Paul A. Miller, P.E., Plans Development Engineer
EPA Representatives	Chuck Schadel, EPA Region 3
EPA Contractors	Max Kuker, PG Environmental, LLC Pieter Beyer, PG Environmental, LLC

PennDOT District No. 9: August 3–4, 2011	
State of Pennsylvania, Department of Transportation	Tom Yocum, Environmental Manager Mike Rishel, Training Coordinator Lance Eckenrode, Assistant Construction Engineer Dave Condo, Environmental Chemist 2 Bill Oleksak, District Maintenance Manager Wally Tonasseti, Assistant District Executive – Maintenance Mike Henry, ACE – Construction Vince Greenland, Assistant District Executive – Design Paul Burns, Blair County Manager
EPA Representatives	Andrew Dinsmore, EPA Region 3 Pete Gold, EPA Region 3
EPA Contractors	Scott Coulson, PG Environmental, LLC Luz Slauter, PG Environmental, LLC

PennDOT District No. 11: August 3–4, 2011	
State of Pennsylvania, Department of Transportation	J. Tyler Mercer, SEMP Coordinator Mark Young, District Environmental Manager Jim Keys, District Maintenance Manager Jonathan Gesinski, District Operations Manager Ken Thornton, SEMP Chief
EPA Representatives	Chuck Schadel, EPA Region 3
EPA Contractors	Max Kuker, PG Environmental, LLC Pieter Beyer, PG Environmental, LLC

PennDOT District No. 2: August 4, 2011	
State of Pennsylvania, Department of Transportation	Sharon Hay, SEMP Manager Kristen Smeal, SEMP Coordinator Sandy Snyder, Management Tech Dave Condo, Environmental Chemist 2
EPA Representatives	Pete Gold, EPA Region 3
EPA Contractors	Scott Coulson, PG Environmental, LLC

PennDOT Closing Conference: August 5, 2011	
State of Pennsylvania, Department of Transportation	David Mallin, Program Section Chief BOMO Gary Fawver, Chief EQAD BOPD Bruce Harter, Chief Maintenance Division Dave Condo, Environmental Chemist 2 Ken Thornton, SEMP Chief Greg Buterbaugh, MS4 Permit Coordinator and BOMO
EPA Representatives	Chuck Schadel, EPA Region 3 Andrew Dinsmore, EPA Region 3
EPA Contractors	Max Kuker, PG Environmental, LLC Scott Coulson, PG Environmental, LLC

Information Recorded in This Report

During the MS4 inspection, the EPA Inspection Team obtained documentation and other supporting evidence regarding compliance with the Permit. Pertinent information obtained during the inspection is presented in this inspection report. The information in this report might have been obtained before or after meeting with PennDOT staff August 1–5, 2011. The presentation of observations, statements, and/or references recorded in this report does not constitute a compliance determination or notice of violation. Referenced documentation used as supporting evidence is provided in Appendix B, and photo documentation is provided in Appendices C, D, and E.

Prior to the inspection, the EPA Inspection Team formally requested that PennDOT have specific documentation available for review at the time of the inspection. The EPA Inspection Team provided PennDOT with a written list of requested records on July 15, 2011 (hereinafter, EPA Records Request; see Appendix B, Exhibit 1). In response, PennDOT made multiple documents available during the inspection and also provided the EPA Inspection Team with an inventory of those documents (hereinafter, PennDOT Response Inventory; see Appendix B, Exhibit 2). In addition, in response to the EPA Records Request, PennDOT uploaded nine documents to a file transfer protocol (FTP) website provided by the EPA Inspection Team (see Appendix B, Exhibit 3). The EPA Records Request and PennDOT Response Inventory are referenced, as applicable, throughout this inspection report.

Illicit Discharge Detection and Elimination (IDD&E) Minimum Control Measure (MCM)

Part A.2 of the Permit required PennDOT to implement a program to detect and eliminate illicit discharges from its MS4 to surface waters of the State in accordance with the requirements set forth at Part D.3 of the Permit.

The following is a summary of requirements² from Part D.3 of the Permit, “Illicit Discharge Detection and Elimination (IDD&E) Minimum Control Measure”:

- Develop map(s) of PennDOT’s municipal separate storm sewer system outfalls and identify the receiving streams (names, watersheds, stream classifications etc.) in EPA or DEP designated urbanized areas;

² The Permit summarizes the MCM requirements prior to providing a table of specific requirements for each permit year, written descriptions of specific program requirements, and a list of measureable goals for the MCM. For verbatim language of the permit requirements, see Part D, Section 3, of the Permit, “Illicit Discharge Detection and Elimination Minimum Control Measure.”

- Implement the IDD&E Program that includes field screening, prioritization and procedures and schedule for identifying and eliminating illicit discharges from PennDOT's MS4 system; and
- Annually evaluate and assess the effectiveness of the IDD&E Program and make necessary changes.

**Observation 1. Field Screening Program for Illicit Discharges—
Priority List**

Part D.3 of the Permit, "Field Screening Program for Illicit Discharges," stated the following regarding field screening and priority lists:

Field screening is necessary to identify the source(s) of the actual illicit discharges observed by PennDOT in its inspection program. The Priority List created each year will serve as the basis for field screening activities. The annual field screening begins in Year 2 of this permit. Every outfall in the Priority Areas will be screened two times a year as each priority area is screened.

Furthermore, Part D.3 of the Permit, "PennDOT's IDD&E Program Measureable Goals," specified that by the end of Permit Year 1 (May 27, 2006), "High Risk Areas" should have been prioritized, based on previous known instances of illicit discharges, and that by the end of Permit Year 2 (and continuing each year through Permit Year 5), 25 percent of PennDOT's MS4 system should have been inspected and field-screened for illicit discharges.

The EPA Inspection Team formally requested the "Priority List" required by the Permit (most recent Reporting Year)" (see Appendix B, Exhibit 1, Item No. 8), but PennDOT did not provide the requested records. The PennDOT Response Inventory states, "The requested documents do not exist. Twenty-five percent (25%) of the outfalls are inspected per year" (see Appendix B, Exhibit 2, Item No. 8).

During the discussions held at the Central Office, the PennDOT MS4 Permit Coordinator, , and District 8 Strategic Environmental Management Program (SEMP) Manager explained that MS4 system inspections are conducted through PennDOT's Systematic Techniques to Analyze and Manage Pennsylvania's Pavements (STAMPP) Program. As described in PennDOT's *Drainage Condition Survey Training 2011* PowerPoint presentation for the STAMPP Program, the purpose of the STAMPP Survey Program is to collect data in order to "[d]istribute maintenance money to counties as needed; [t]rack the performance of drainage features over time; and [i]dentify candidate projects for planned maintenance" (see Appendix B, Exhibit 4). STAMPP Surveys are conducted to determine the structural integrity of drainage structures, as well as perform an IDD&E function. Further discussion regarding the STAMPP Program is included in Observation No. 5.

In addition to the activities conducted as part of the STAMPP Program, Central Office personnel explained that each district is responsible for identifying potential monitoring locations at PennDOT-owned facilities (e.g., stockpile sites and PennDOT maintenance offices) within that district. During the inspection, PennDOT provided the EPA Inspection Team with a list titled “Dry-Weather Flow Sites to be Monitored,” dated 2006 (hereinafter, 2006 Priority List) in response to EPA Records Request Item No. 10. The 2006 Priority List identified 32 MS4 outfall monitoring sites located at PennDOT stockpile facilities throughout PennDOT’s 11 districts (see Appendix B, Exhibit 5). Central Office personnel explained that the sites included on the 2006 Priority List are identified “dry-gulch” outfall locations at PennDOT-owned facilities and that the list had not been updated since its creation in 2006. The PennDOT MS4 Permit Coordinator also explained that the Central Office had not developed or implemented a standardized method for district maintenance staff to document or report field screening results for the sites included on the 2006 Priority List.

Furthermore, Section II.14 of PennDOT’s 2007–2008 and 2009–2010 MS4 Annual Reports states that “PennDOT has reviewed our facilities and identified outfalls that emanate from stockpile locations or other High Risk assessment areas for bi-annual dry weather flow assessments. No issues have been discovered.” The EPA Inspection Team noted that each annual report includes an identical statement regarding the identification of high-risk areas, and PennDOT district staff interviewed during the course of the inspection explained that they had not documented the occurrence of the dry-weather flow assessments. Observation No. 2 provides supporting evidence for this statement.

Observation 2. Field Screening Program for Illicit Discharges – Field Screening Records

Part D.3 of the Permit, “Field Screening Program for Illicit Discharges,” stated the following regarding field screening:

Field screening is necessary to identify the source(s) of the actual illicit discharges observed by PennDOT in its inspection program. The Priority List created each year will serve as the basis for field screening activities. The annual field screening begins in Year 2 of this permit. Every outfall in the Priority Areas will be screened two times a year as each priority area is screened.

Furthermore, Part D.3 of the Permit, “PennDOT’s IDD&E Program Measureable Goals,” specified that by the end of Permit Year 2 (and continuing each year through Permit Year 5), 25 percent of PennDOT’s MS4 system should have been inspected and field-screened for illicit discharges.

The EPA Inspection Team formally requested “Records of Priority List outfall inspections/dry weather field screening and monitoring (most recent Reporting Year)” (see Appendix B, Exhibit 2, Item No. 10).

PennDOT indicated in the PennDOT Response Inventory that a document titled "MS4 Dry Gultch Areas" was provided to satisfy the document request; however, the document only contained a priority list of dry-weather flow sites to be monitored during Year 2 of Permit coverage and was dated 2006 (see Appendix B, Exhibit 5). The PennDOT provided documentation consisted of a list of 32 MS4 outfall monitoring sites located at PennDOT stockpile facilities throughout PennDOT's 11 districts. Central Office personnel explained that the sites included on the 2006 Priority List are identified "dry-gultch" outfall locations at PennDOT-owned facilities and that the list had not been updated since its creation in 2006.

PennDOT District 9 was the only district to provide the EPA Inspection Team with records demonstrating that dry-weather screening activities had been conducted. District 9 provided documentation for two "dry gulch" sites that had been screened in October 2007; however, the records pertained only to sites identified on the 2006 Priority List (see Appendix B, Exhibit 6). District 9 personnel were not aware of whether the list had been updated by the District since 2006 or whether screening for the sites on the 2006 Priority List had been conducted twice a year since October 2007, as required by the Permit. It should be noted that District 1 staff provided the EPA Inspection Team with photographs of "NPDES dry gulch sites" but did not provide associated documentation to demonstrate that inspections or dry-weather field screening and monitoring had been conducted at the sites identified in the photographs. EPA requested records of field screening for all outfalls within MS4 jurisdictions. The request for the field screening records for the past 3 years was made during the inspection and by email after the inspection. As of the date of this inspection report, PennDOT has provided partial records of dry weather screening.

Observation 3. Field Screening Program for Illicit Discharges— PennDOT Inspection Program for Facilities

Part D.3 of the Permit, "Inspection Program," stated the following regarding the illicit discharge training and response of PennDOT personnel:

PennDOT personnel are also trained to detect/control observable types of illicit discharges flowing onto PennDOT property or from PennDOT's mapped outfalls. PennDOT personnel also apply this detection training in their routine activities. That is, if PennDOT personnel detect an illicit discharge of an observable type, appropriate response measures are initiated as indicated in a "response plan". PennDOT's response plan, at a minimum, shall include steps to identify its source and report the location, nature of the discharge, and immediate observable environmental impacts to the Department of Environmental Protection.

During the Central Office discussions, PennDOT staff explained that Combined Facility Response Plans (CFRPs) were developed for each PennDOT-owned maintenance facility and stockpile location to assist the facility staff with implementing pollution prevention activities and help address illicit discharges.

The EPA Inspection Team reviewed multiple examples of the CFRPs and noted that the plans do not include information to specifically address Permit requirements (e.g., focus on stormwater pollution prevention to facility inspections for illicit discharge detection; or procedures to report the location, nature of the discharge, and immediate observable environmental impacts to DEP).

For example, each CFRP includes a “Spill Incident Report Form” (see Appendix B, Exhibit 7), which is to be used for reporting incidents related to spills, fire, or explosions from hazardous material incidents; however, this form is not specific to the sites listed on the 2006 Priority List, nor does it contain information pertaining to reporting suspect flows. In addition, PennDOT provided a “Foreman’s Quarterly Stockpile Checklist” (see Appendix B, Exhibit 8) and explained that the checklist is used to conduct quarterly facility inspections and planning for stockpile facilities. Although checklist item no. 3 in the Foreman’s Quarterly Stockpile Checklist states “Are all drainage systems clean and functional,” the checklist item does not specifically refer to site locations identified on PennDOT’s 2006 Priority List. Part D.3 of the Permit required that PennDOT’s response plan, at a minimum, include steps to identify the source of the discharge and report the location, nature of the discharge, and immediate observable environmental impacts to DEP. The checklist does not include specific fields to include additional visual observations, steps, and/or instructions to identify sources of potential suspect flows and report the location, nature of the discharge, and any immediate observable environmental impacts to be reported to DEP.

**Observation 4. Field Screening Program for Illicit Discharges –
Triggering further Action for Observed Dry-weather Flows**

Part D.3 of the Permit, “Field Screening Program for Illicit Discharges,” states the following:

If someone conducting the field screening discovers a dry-weather flow, they (or another designated individual with the proper training) must collect a sample of that flow for analysis. Such a discovery triggers the requirements under the other two program elements: Identify Source of Illicit Discharges; Remove or Correct Illicit Discharges.

The program elements that could be triggered by a dry-weather flow observation included analysis of the flow, identification of the source, elimination of the discharge, and documentation. A full description of the program elements can be found at Part D.3 of the Permit, “Field Screening Program for Illicit Discharges.”

The following is a summary of the requirements from Part D.3 of the Permit, “Field Screening Program for Illicit Discharges, 2. Identify Source of Illicit Discharge”:

- Analyze the dry-weather flow. Analyze the samples for the characteristics and pollutants listed in Table below:

Characteristic/Pollutant	Method
Color	Visual observation
Odor	Visual observation
Turbidity	Visual observation
Sheen/scum	Visual observation
Steady or intermittent flow	Visual observation
Garbage or sewage present	Visual observation
Vegetation Condition	Visual observation

- Identify the source of the discharge. The data obtained from visual, in-field analysis will be used to determine the source of the dry-weather flow or floatables. Using this information, PennDOT will attempt to narrow down the potential sources of the dry-weather flow and begin storm drain investigations by tracing the flow upstream using storm drain maps and by inspecting upgradient manholes and storm drains. If need be, PennDOT may conduct more focused tests to pinpoint the source.

The following is a summary of the requirements from Part D.3 of the Permit, "Field Screening Program for Illicit Discharges, 3. Remove or Correct the Illicit Discharge":

- Determine if the flow is from illegal dumping or an improper connection.
- Take the appropriate action to correct the discharge.
- Document all steps taken.
- List the status of all illicit discharges detected and/or removed in the next Annual Report to DEP.

As previously discussed in Observation No. 1, PennDOT Central Office personnel explained that the STAMPP Program is PennDOT's primary program for field screening activities. PennDOT has developed a PowerPoint training presentation titled *Drainage Condition Survey Training 2011*, which includes procedures for using the STAMPP "Program Drainage Condition Survey Form" (hereinafter, STAMPP Survey Form) to conduct field screening activities. The *Drainage Condition Survey Training 2011* presentation does not include procedures and practices for instances where dry-weather flow (e.g., standing water, flow, or visual/factory signs of illicit discharges) is observed. Furthermore, the STAMPP Survey Form is specific to the identification of different types of structural drainage features and their physical condition (see Appendix B, Exhibit 9).

Part D.3 of the Permit required that if a dry-weather flow is discovered, a sample of that flow must be collected for analysis, which would include identification, observations, and removal/correction of the dry-weather flow.

Systematic Techniques to Analyze and Manage Pennsylvania's Pavements (STAMPP) Program

Part D.3 of the Permit, "Inspection Program," required that PennDOT use its STAMPP Program as "one mechanism for visually inspecting one-fourth of all PennDOT roadway systems each year." It also stated that "in one Permit term, the entire PennDOT MS4 system will be inspected and screened for observable types of illicit discharges for elimination."

As discussed previously in Observation No. 1, PennDOT relies on its STAMPP Program to conduct field screening of drainage structures along roadways. PennDOT Central Office personnel explained that the STAMPP Program uses a partnership with Pennsylvania State University students to conduct traffic studies, bridge inspections, pipe inspections, and guardrail inspections and to complete the STAMPP Surveys. As also discussed earlier in Observation No. 1, PennDOT's *Drainage Condition Survey Training 2011* PowerPoint presentation (see Appendix B, Exhibit 4) for the STAMPP Program describes the STAMPP Surveys as a mechanism to "[d]istribute maintenance money to counties as needed; [t]rack the performance of drainage features over time; and [i]dentify candidate projects for planned maintenance").

The EPA Inspection Team reviewed PennDOT's *Drainage Condition Survey Field Manual* (hereinafter, PUB 73), dated April 2010 (see Appendix B, Exhibit 10). PUB 73 describes the STAMPP Program screening surveys as "both an inventory of the various drainage elements along Pennsylvania's highways and a survey of their conditions." STAMPP Program training and procedures are not specific to the Permit requirements related to inspection of all PennDOT's MS4 highway drainage systems in order to document and track observable types of illicit discharges for elimination. In addition, STAMPP Program Surveys are not specific to the Permit requirements listed in Part D.3 of the Permit regarding source identification and removal/correction of illicit discharges identified during field screening activities.

Observation 5. Inspection Program Training

Part D.3 of the Permit, *Inspection Program*, required the following regarding PennDOT personnel training:

PennDOT trains personnel working in operations and maintenance units that have the potential to cause/control unauthorized discharges. Training also covers proper procedures for the containment, reporting and removal of such discharges.... Inspection employees in PennDOT's programs will be trained to detect observable types of illicit discharges and to take appropriate steps to respond to these discharges.... PennDOT personnel also apply this detection training in their routine activities.

The EPA Inspection Team formally requested “Employee/maintenance personnel training records and syllabus pertaining to IDDE (most recent Reporting Year)” (see Appendix B, Exhibit 1, Item No. 13). In response to the request, PennDOT’s Central Office indicated in Item No. 13 of the PennDOT Response Inventory that training documentation would be “provided at district level” (see Appendix B, Exhibit 2, Item No. 13). However, with the exception of District 2, PennDOT the PennDOT districts visited did not provide documentation of training nor were district staff aware of any training that had occurred pertaining to IDDE inspections.

PennDOT Central office staff explained that PennDOT employees are required to complete specified environmental trainings as part of PennDOT’s SEMP Program in order to maintain PennDOT’s ISO 14001 Program certification. The Permittee provided the EPA Inspection Team with a list of required trainings for the SEMP Program, which included an “Environmental Awareness Training”; however, no training syllabus was provided. In addition, a PowerPoint training presentation titled *NPDES Permit Authorization to Discharge Stormwater (from PennDOT’s roadway system)* was provided to the EPA Inspection Team by District 2 personnel (see Appendix B, Exhibit 11). The District 2 SEMP Manager explained that this training was provided to District maintenance management personnel on one occasion; however, no attendance records were available for review. The PowerPoint presentation includes several of the IDD&E Permit requirements, such as the development of an IDD&E response plan, how to avoid accidental discharges, and reporting requirements for a suspect flow (see Appendix B, Exhibit 11, pages 4 through 6). The PowerPoint training presentation contains information regarding IDD&E, stating that part of the overall goal of the permit requirement is “providing employees with the knowledge to detect and report illicit discharges.” However, the EPA Inspection Team observed that almost all several PennDOT maintenance staff interviewed at the district level in District 1 were not aware of what an illicit discharge is or how to identify one until it was explained by the EPA Inspection Team, including staff from District 2.

Furthermore, the EPA Inspection Team observed that although the PennDOT CFRP template for maintenance facility and stockpile locations includes forms to document training related to “HAZMAT, Fire Safety Training, CFR Plan & Spill Response Training, and Right-To-Know Training” (see Appendix B, Exhibit 12, pages 13 through 18), the training documentation forms do not contain information to demonstrate that PennDOT personnel were provided training on how to detect illicit discharges and take appropriate steps to respond to them.

Observation 6. Potential Illicit Discharges and/or Connections

During site visits to post-construction best management practices (BMPs) in District 1, the EPA Inspection Team noted three potential illicit discharges entering PennDOT’s right-of-way and five examples of potential illicit connections to the PennDOT MS4.

A summary of these site visits and observations is provided below. District 1 PennDOT maintenance staff were not knowledgeable regarding illicit discharges, permit requirements regarding illicit discharges, or the existence of the illicit discharges. District 1 Maintenance staff further stated that they do not actively look for discharges during their routine field activities. Appendix C includes photographic documentation for three illicit discharges observed in PennDOT District 1 and described below.

The EPA Inspection Team identified three potential illicit discharges to the PennDOT MS4:

- *Waldameer Water Park located between 110 Peninsula Drive and 408 Peninsula Drive in Erie, Pa.* A dry-weather flow was observed flowing along Peninsula Drive and entering a storm drain several hundred yards down the road. Further investigation revealed that the steady flow of water originated from the hillside below Waldameer Water Park and then flowed down the side of the hill, along the roadway, to a storm drain along the shoulder of Peninsula Drive. In addition, upon observation of the storm drain, it was noted that the storm drain was also receiving flow from another source through an inlet pipe below the surface. Whether the flows were a result of activities from the water park or some other source (i.e., groundwater) was not evident. No interview was conducted with Waldameer Water Park representatives to determine whether they were aware of the origin of the flow. PennDOT representatives stated that they had previously identified the flow as a potential illicit discharge; however, they could not provide the EPA Inspection Team with documentation or other information regarding the flow (see Appendix C, Photographs 1 through 5, for visual documentation of the potential illicit discharge).
- *Jensen's Target Collision located at 3000 West 12th Street, Erie, Pa.* Vehicle washing was observed being conducted under cover at Jensen's Target Collision vehicle repair shop; however, wash water from the covered area was observed flowing toward a storm drain in the adjacent, PennDOT-owned roadway. At the time of the site visit, wash water was not actively entering the roadway storm drain inlet, but it was observed within several feet of the storm drain inlet. The EPA Inspection Team did not conduct an interview with repair shop personnel to determine the frequency of vehicle washing in this area. PennDOT representatives stated that they had not previously identified the washing activities at the vehicle repair shop as a potential illicit discharge to the PennDOT MS4 (see Appendix C, Photographs 6 through 9, for visual documentation of the potential illicit discharge).
- *Mason Farms Country Market located at 839 Peninsula Drive, Erie, Pa.* A dry-weather flow was observed entering the curb and gutter along the 800 block of Peninsula Drive and flowing toward a storm drain inlet at the corner of West 8th Street (also referred to as "Route 5") and Peninsula Drive.

Further investigation revealed that the water flowing across the parking lot was from irrigation activities being conducted at the outdoor nursery at the Mason Farms Country Market. An interview was not conducted with Mason Farms Country Market personnel to determine the frequency of irrigation of plants at the nursery. PennDOT representatives present during the site visit stated that they had not previously identified the irrigation water as a potential illicit discharge to the PennDOT MS4 (see Appendix C, Photographs 10 through 18, for visual documentation of the potential illicit discharge).

Part C.1 of the Permit, "Prohibition of Non-Stormwater Discharges," listed irrigation drainage as a permitted non-stormwater discharge; however, it required that PennDOT or DEP determine that the non-stormwater component of the discharge was not a significant contributor of pollution to the MS4. Part C.1 of the Permit further stated that PennDOT "may not discharge floating materials, oil, grease, scum, foam, sheen and substances which produce color, taste, turbidity or settle to form deposits in concentrations or amounts sufficient to be, or creating a danger of being, inimical to the water uses to be protected or to human, animal, plant or aquatic life."

Post-Construction Stormwater Runoff Management MCM

Part A.2 of the Permit required PennDOT to implement a program to address post-construction stormwater management for new development and redevelopment activities in accordance with the requirements set forth at Part D.5 of the Permit.

The following is a summary of requirements³ from Part D.5 of the Permit, "Post-Construction Stormwater Runoff Management Minimum Control Measure":

- Update erosion, sediment, and stormwater control policy materials or guidance documents to include Department's updated BMP Manual for post-construction activities as appropriate.
- Coordinate the review and approval of post-construction BMPs with the county/DEP in conjunction with NPDES Construction Activities permit review as described in the Construction Activities Minimum Control Measure.
- Implement update(s) or revisions to post-construction BMPs in PENNDOT's erosion, sediment, and stormwater control policy materials or guidance documents as appropriate.
- Ensure that post-construction stormwater management BMPs are implemented, operated and maintained.
- Road maintenance activities as defined in Part B.5 of this permit are exempt from this minimum control measure if they do not need an NPDES Construction activities permit. These activities are not exempt from applicable Chapter 102 requirements, and the pollution prevention requirements of this permit.

Post-construction site visits. During the course of the inspection, the EPA Inspection Team visited six PennDOT post-construction BMPs - one in District 1, two in District 8, and three in District 11. Two additional post-construction BMP visits were attempted in District 1; however, the District representative that escorted the EPA Inspection Team (the District 1 HEM II) was not able to locate the BMPs. Summary observations of the visited PennDOT post-construction BMPs are contained in Appendix D.

Observation 7. Post-Construction BMP Implementation and Maintenance

Part D.5 of the Permit required PennDOT to "[e]nsure that Post-construction stormwater management BMPs are implemented, operated and maintained." Part D.5 of the Permit, "Summary of Minimum Measure Permit Requirements," further specifies that the Permittee is required to assure "long-term operation and maintenance of BMPs."

³ The Permit summarizes the MCM requirements prior to providing a table of specific requirements for each permit year, written descriptions of additional program requirements, and a list of measureable goals for the MCM. For verbatim language of the permit requirements, see Part D, Section 5, of the Permit, "Post-Construction Stormwater Runoff Management Minimum Control Measure."

As designated in DEP permits and in PENNDOT's erosion, sediment, and stormwater control policy materials or guidance documents" during Permit Year 1, PennDOT is required to continue those efforts during Permit Years 2 through 5. Furthermore, Part C, Section 5, of Permit No. PAG-02 (a DEP-issued permit) specifies requirements for preparing, developing, and implementing Post-Construction Stormwater Management (hereinafter, PCSM) plans.

PennDOT's *Drainage Manual*, publication 584, 2010 edition (hereinafter, *Drainage Manual*); Chapter 14, Post Construction Stormwater Management; Section 19, Maintenance, states the following:

All BMPs should be developed with a list of maintenance activities to be performed which provide for the long-term viability of the BMP. The maintenance schedule should provide for both short-term maintenance needs and long term rehabilitation items that may be necessary in the future and which are more extensive than the routine maintenance performed throughout the year. The District maintenance unit should be provided with this list and schedule of BMP maintenance activities, as they will be responsible for the routine maintenance of the BMP.

The EPA Inspection Team formally requested an "Example Post-Construction BMP plan" (see Appendix B, Exhibit 2, Item No. 28), and PennDOT provided the documentation as requested. The EPA Inspection Team observed that the Design staff at each district visited (District Nos. 1, 2, 8, 9, and 11) were familiar with the requirements of the PCSM plans and were also able to provide example plans. A brief review of the plans provided indicated that each plan contains short- and long-term maintenance requirements as required.

During the inspection, the EPA Inspection Team verbally requested the erosion and sediment and PCSM plans required by Section C of *General NPDES Permit for Stormwater Discharges Associated with Construction Activities* (PAG-02) and associated inspection and maintenance records for select post-construction BMPs visited during the inspection. The EPA Inspection Team requested PCSM plans for a total of eight post-construction BMPs (three in District 1, two in District 8, and three in District 11). PennDOT was only able to produce PCSM plans for 2 of the eight post-construction BMPs and was not able to provide inspection and/or maintenance records for any of the post-construction BMPs.

Although the PCSM plans were developed by the district design staff, the plans were not provided to the district maintenance units as specified in PennDOT's *Drainage Manual* (see Permit citation above); therefore, at the time of the inspection, there was no evidence that the plans were being implemented and the BMPs were being maintained in accordance with the PCSM plans.

Furthermore, District maintenance staff were not familiar with the typical requirements of the plans and in many cases did not have design drawings of the BMPs to be used as a reference during maintenance activities.

District maintenance management staff from several District offices stated that BMPs are typically maintained in a reactive manner (i.e., in response to complaints or potential hazards such as roadway flooding) and that periodic inspections of the BMPs are not conducted to ensure that the BMPs are correctly operated and maintained.

As stated above, the EPA Inspection Team conducted six facility visits to Post-Construction BMPs in Districts 1, 8, and 11. During the visits, minor maintenance issues were noted. The issues included slope erosion; trash, sediment and debris accumulation; discolored water; presence of foam; and visible sheen on the water surface within a detention pond. A summary of the maintenance observations is provided in Appendix D.

It should be noted that none of the BMPs were inventoried, nor had PennDOT compiled a list of inspection/maintenance activities in accordance with the approved PCSM plans.

Pollution Prevention and Good Housekeeping MCM

Part A.2 of the Permit required PennDOT to implement a Pollution Prevention and Good Housekeeping program for selected PennDOT activities in accordance with the requirements set forth at Part D.6 of the Permit.

The following is a summary of requirements⁴ from Part D.6 of the Permit, "Pollution Prevention and Good Housekeeping Minimum Control Measure":

- Develop and implement Comprehensive Pollution Prevention Plan for PennDOT facilities focusing particularly on vehicle maintenance activities, fueling and washing of vehicles, maintenance of stormwater facilities, and employee training within urbanized areas.
- Develop Operation and Maintenance (O&M) program for PennDOT facilities.
- Train employees through various programs and visual reminders (signing).
- Evaluate and monitor the program.

Observation 8. Comprehensive Pollution Prevention Plan

Part D.6 of the Permit required PennDOT to develop a "Comprehensive Pollution Prevention Plan for PennDOT facilities focusing particularly on vehicle maintenance activities, fueling and washing of vehicles, maintenance of stormwater facilities, and employee training within urbanized areas."

The EPA Inspection Team formally requested a "Comprehensive Pollution Prevention Plan (current version)" (see Appendix B, Exhibit 1, Item No. 15), but PennDOT did not provide the requested record. In the PennDOT Response Inventory, PennDOT further explained that "[t]he document requested does not exist. Pollution prevention is addressed in a number of PennDOT's programs. There is no comprehensive plan" (see Appendix B, Exhibit 2, Item No. 15).

PennDOT's Central Office SEMP personnel explained that CFRPs were developed for each maintenance facility and stockpile location in the state, which includes approximately 350 to 370 PennDOT-owned facilities. PennDOT provided the EPA Inspection Team with an example CFRP and explained that each CFRP is based on a template (see Appendix B, Exhibit 12). Central Office SEMP personnel explained that in addition to the CFRP, PennDOT maintenance management personnel should use the *PennDOT Maintenance Manual* (hereinafter, PUB 23) and the *PennDOT Maintenance Foreman's Manual* (hereinafter, PUB 113) for guidance regarding facility-specific BMPs.

⁴ The Permit summarizes the MCM requirements prior to providing a table of specific requirements for each permit year, written descriptions of additional program requirements, and a list of measureable goals for the MCM. For verbatim language of the permit requirements, see Part D, Section 6, of the Permit, "Pollution Prevention and Good Housekeeping Minimum Control Measure."

The EPA Inspection Team observed that the CFRPs for maintenance facilities and stockpile locations do not include information regarding stormwater pollution prevention for vehicle maintenance activities, fueling and washing of vehicles, or maintenance of stormwater facilities, as required by Part D.6 of the Permit, "PennDOT's Pollution Prevention and Good Housekeeping Program." Specifically, the CFRPs more directly relate to storage tank containment structure inspections and spill response procedures than to specific BMPs for the above-listed target areas and associated pollution prevention. For example, the CFRP includes a "Weekly Secondary/Emergency Containment Inspection Checklist," which specifies information for visual checks of containment areas, but it does not contain any information or checklists regarding vehicle maintenance activities, fueling and washing of vehicles, maintenance of stormwater facilities, or illicit discharges or connections (see Appendix B, Exhibit 12, page 21).

Furthermore, the EPA Inspection Team formally requested a "Written description of Vehicle Operations and Maintenance Program," (see Appendix B, Exhibit 1, Item No. 16) but the requested record was not available. In the PennDOT Response Inventory, PennDOT explained that the requested document was "N/A," meaning not applicable (see Appendix B, Exhibit 2, Item No. 16). No further explanation of the requested document's status was provided in the PennDOT Response Inventory.

The EPA Inspection Team inspected 27 maintenance yards throughout the five PennDOT districts visited during the inspection. Maintenance facility and stockpile site visits with observations relevant to the Permit requirements for vehicle maintenance activities and vehicle washing are listed below.

Additional maintenance yard visit observations pertaining to the Permit Part D.6 requirements for vehicle maintenance activities, fueling and washing of vehicles, and maintenance of stormwater facilities are provided in Appendix E, which includes a narrative summary of field observations and associated photo documentation.

The EPA Inspection Team identified pollution prevention concerns at 11 PennDOT-owned facilities visited during the inspection. See Appendix E, Site Visit Report Nos. 1 through 11 for details regarding the facilities).

- *Crawford County Maintenance District 01 Facility (Meadville Maintenance Facility) located at the intersection of Mercer Pike and Smock Highway, Meadville, Pa. (see Appendix E, Site Visit Report No. 1).*
- *Centre County Maintenance 01 Facility (Bellefonte Maintenance Facility) located at 1000 East Bishop Street, Bellefonte, Pa. (see Appendix E, Site Visit Report No. 2).*
- *Lancaster County Maintenance 01 Facility (Lancaster Maintenance Facility) located at 2105 Lincoln Highway East, Lancaster, Pa. (see Appendix E, Site Visit Report No. 3).*
- *Allegheny County Maintenance District 01 Facility (Aspinwall Maintenance Facility) located at 51 Fox Chapel Road, Pittsburgh, Pa. (see Appendix E, Site Visit Report No. 4).*

- *Dauphin County Maintenance 01 Facility (Herr Street Maintenance Facility) located at 2140 Herr Street, Harrisburg, Pa. (see Appendix E, Site Visit Report No. 5).*
- *York County Maintenance District 01 Facility (York Maintenance Facility) located at 1920 Susquehanna Trail North, York, Pa. (see Appendix E, Site Visit Report No. 6).*
- *Blair County Maintenance 01 Facility (Blair County Maintenance Facility) located at 1598 North Juniata Street, Hollidaysburg, Pa. (see Appendix E, Site Visit Report No. 7).*
- *Beaver County Maintenance District 01 Facility (Rochester Maintenance Facility) located at 155 Stewart Avenue, Rochester, Pa. (see Appendix E, Site Visit Report No. 8).*
- *Cumberland County Maintenance 01 Facility (Carlisle Maintenance Facility) located at 540 West North Street, Carlisle, Pa. (see Appendix E, Site Visit Report No. 9).*
- *Cumberland County Maintenance District 8-2 Lemoyne Stockpile Facility (Lemoyne Stockpile) located at 799 Ayers Avenue, Lemoyne, Pa. (see Appendix E, Site Visit Report No. 10).*
- *Allegheny County Stockpile No.12 (Bridgeville Stockpile) located on Washington Pike, Bridgeville, Pa. (see Appendix E, Site Visit Report No. 11).*

Observation 9. Pollution Prevention – Floor Drains

Part D.6 of the Permit, “PennDOT’s Pollution Prevention and Good Housekeeping Program,” stated that “PennDOT will focus on the pollution prevention of the maintenance operations of vehicles through: proper recycling of used oil and oil filters, plugging of floor drains that do not have proper sewer connections, place leaking vehicles on impervious pads or place drip pans under leaking vehicles and having guidelines and protocols for spill cleanup.”

During the Central Office discussion, PennDOT personnel explained that storm drainage and sanitary sewer utility improvements had been made to PennDOT’s maintenance facilities, which included plugging equipment maintenance building floor drains. However, PennDOT was not able to demonstrate that all floor drains had proper sewer connections at all maintenance yards throughout the state.

Upon subsequent maintenance yard inspections, the EPA Inspection Team observed that multiple maintenance facility drainage schematics did not identify facility drainage features, and/or incorrectly identified drainage features, and/or showed floor drain connections to the storm drain system during site visits conducted in District Nos. 1, 2, 8, 9, and 11.

Within the five districts visited, the EPA Inspection Team observed six PennDOT-owned facilities that were equipped with multiple indoor floor drains, but neither the CFRP nor the facility drainage plan provided the revisions or detail necessary to determine whether the floor drains are currently plumbed to the sanitary sewer system or to the storm drain system. Site visits with observations relevant to the Permit requirements for plugging floor drains that do not have proper sewer connections at vehicle maintenance operations are discussed below. Additional maintenance facility site visit observations pertaining to the Permit Part D.6 requirements for maintenance operations of vehicles are provided in Appendix E, which includes a narrative summary of field observations and associated photo documentation.

The EPA Inspection Team identified five PennDOT-owned facilities with site concerns pertaining to facility drainage plans having the revisions or detail necessary to demonstrate whether the floor drains are currently plumbed to the sanitary sewer system or to the storm drain system:

- *Centre County Maintenance 01 Facility (Belleville Maintenance Facility) located at 1000 E. Bishop Street, Belleville, Pa.* Multiple floor drains were observed in the indoor portion of the vehicle and equipment maintenance shop building (see Appendix E, Site Visit Report No. 2).
- *Lancaster County Maintenance 01 Facility (Lancaster Maintenance Facility) located at 2105 Lincoln Hwy East, Lancaster, Pa.* The floor drains inside the equipment maintenance garage are connected to the subsurface storm drain system that is connected to the City of Lancaster's storm water system (see Appendix E, Site Visit Report No. 3).
- *Allegheny County Maintenance District 01 Facility (Aspinwall Maintenance Facility) located at 51 Fox Chapel Road, Pittsburgh, Pa.* The CFRP showed floor drains in the welding shop being connected to convey flow out the side of the building and directly into an outdoor drainage inlet (see Appendix E, Site Visit Report No. 4).
- *Dauphin County Maintenance 01 Facility (Herr Street Maintenance Facility) located at 2140 Herr Street, Harrisburg, Pa.* The indoor portion of the vehicle and equipment maintenance building is equipped with multiple floor drains (see Appendix E, Site Visit Report No. 5).
- *York County Maintenance District 01 Facility (York Maintenance Facility) located at 1920 Susquehanna Trail North, York, Pa.* Facility personnel were not able to demonstrate whether the wash rack area is connected to the sanitary sewer system or to the storm drain system, and the facility CFRP Site Map was not available for review (see Appendix E, Site Visit Report No. 6).

In addition, the EPA Inspection Team identified seven PennDOT-owned facilities whose CFRPs showed connection to outdoor drainage inlets and/or systems:

- *Crawford County Maintenance District 01 Facility (Meadville Maintenance Facility) located at the intersection of Mercer Pike and Smock Highway, Meadville, Pa.* (see Appendix E, Site Visit Report No. 1).

- *Lancaster County Maintenance 01 Facility (Lancaster Maintenance Facility) located at 2105 Lincoln Hwy East, Lancaster, Pa. (see Appendix E, Site Visit Report No. 3).*
- *Allegheny County Maintenance District 01 Facility (Aspinwall Maintenance Facility) located at 51 Fox Chapel Road, Pittsburgh, Pa. (see Appendix E, Site Visit Report No. 4).*
- *Dauphin County Maintenance 01 Facility (Herr Street Maintenance Facility) located at 2140 Herr Street, Harrisburg, Pa. (see Appendix E, Site Visit Report No. 5).*
- *Cumberland County Maintenance 01 Facility (Carlisle Maintenance Facility) located at 540 W. North Street, Carlisle, Pa. (see Appendix D, Site Visit Report No. 9).*
- *Dauphin County Stockpile No. 12 located at 2140 Herr Street, Harrisburg, Pa. (see Appendix D, Site Visit Report No. 12).*

Observation 10. Pollution Prevention and Good Housekeeping Program – O&M Program for Facilities

In addition to the summary of requirements, listed above, for PennDOT's Pollution Prevention and Good Housekeeping Minimum Control Measure, Part D.6 of the Permit required the following with regard to an operation and maintenance (O&M) program for PennDOT-owned facilities:

PennDOT will develop and implement an inspection schedule for stormwater facilities. This inspection will evaluate the need for additional maintenance concerns to the stormwater structure and map the locations. In addition, stormwater facilities will be patrolled for litter annually and excess debris removed for the proper operation of the facility. Catch basins will be monitored semiannually for debris/sedimentation build up

The EPA Inspection Team formally requested a "Written description of operation, maintenance and inspection program for stormwater facilities/post-construction BMPs (e.g., Stormwater Facility Operations and Maintenance Program)" (see Appendix B, Exhibit 2, Item No. 20), and "Standard operating procedures (SOPs) for catch basin and post-construction BMP inspections, and checklists used in the field" (see Appendix B, Exhibit 2, Item No. 21), but PennDOT did not provide the requested records. PennDOT provided further explanation in Item No. 20 of the PennDOT Response Inventory, which refers to the PowerPoint training presentations entitled *NPDES Permit Authorization to Discharge Stormwater (from PennDOT's roadway system)* and *Drainage Condition Survey Training* and also references the STAMPP Program Survey for the first requested documentation; however, these documents do not provide representative information showing that PennDOT had a written description of an operation, maintenance, and inspection program for stormwater facilities/post-construction BMPs. Furthermore, Item No. 21 of the PennDOT's Response Inventory states, "The document requested does not exist. Most basins are maintained by the municipalities through municipal agreements" (see Appendix B, Exhibit 2, Item No. 21).

In addition, The EPA Inspection Team formally requested “Records of PennDOT facility inspections conducted for stormwater purposes (most recent Reporting Year)” (see Appendix B, Exhibit 2, Item No. 19), but the requested records were not provided. PennDOT provided further explanation in Item No. 19 of the PennDOT Response Inventory, which states: “Results are recorded on MS4 Outfall Mapping being provided to each location at kick-off meetings” (see Appendix B, Exhibit 2, Item No. 19).

Furthermore, on March 23, 2006, PennDOT’s Deputy Secretary for Highway Administration distributed an *Implementation of Statewide NPDES Permit* memorandum (hereinafter, Implementation Memo) to PennDOT’s District Executives and Bureau Directors, with an overview of the permit tasks and the responsibilities of PennDOT personnel (see Appendix B, Exhibit 13). The Implementation Memo specifies that the BOMO Division will “develop an inspection schedule for district review of stormwater outfalls at maintenance facilities . . . work with SEMP office to train maintenance employees of proper stockpile and garage BMPs” and that facilities management will “work with BOMO in compiling information of current facilities stormwater management programs.”

Although the Permittee had several programs in place to inspect PennDOT facilities, a stormwater O&M and inspection program was not apparent. During the Central Office discussions, PennDOT’s Environmental Chemist 2 and SEMP Manager District 8 explained that quality assurance site assessment inspections are conducted at each maintenance facility and stockpile on an annual basis by SEMP personnel. In addition, PennDOT uses the STAMMP Program to conduct facility and stockpile quality assurance inspections on an annual, staggered-season basis. However, PennDOT did not provide records of such inspections. As previously discussed, although the STAMPP Program is used as one mechanism for visually inspecting PennDOT facilities, STAMPP Surveys are conducted primarily to determine the structural integrity of drainage structures and are not specifically used to judge the cleaning/material removal needs of the drainage structures or storm sewer system.

The EPA Inspection Team observed stormwater concerns at 27 PennDOT-owned facilities visited (i.e., maintenance facilities and stockpiles). The sites visited were in need of routine/preventive maintenance; the EPA Inspection Team observed site conditions such as staining, oil sheens, used absorbent material in areas subject to contact with stormwater, litter, etc. Maintenance site visit observations pertaining to the Permit Part D.6 requirements for maintenance operations are provided in Appendix E, which includes a narrative summary of field observations and associated photo documentation.

Appendix A

Inspection Schedule

Agenda for MS4 Program Inspection
Pennsylvania Department of Transportation (PennDOT) –
Central Office and District 8 (District 8 Harrisburg Meeting Location)
August 1–August 2, 2011
EPA Inspection Team 1

Day	Time	Team A (Luz) Program/Agenda Item	Team B (Scott) Program/Agenda Item
Monday, August 1, 2011	8:00 am - 9:00 am	Kick-off Meeting & Program Management Overview	
	9:00 am - 10:15 am	Illicit Discharge Detection and Elimination (Office)	
	10:15 am - 12:00 pm	Pollution Prevention & Good Housekeeping (Office)	
	12:00 pm - 1:00 pm	Lunch Break	
	1:00 pm - 2:30 pm	Pollution Prevention & Good Housekeeping (Field)	Post-Construction Stormwater Management (Office)
	2:30 pm - 4:30 pm		Open Period for Additional Activities ⁵ (Tentative time slot)
	4:30 pm - 5:00 pm	Recap and Logistics Planning for Tuesday	
Tuesday, August 2, 2011	8:00 am - 9:00 am	Illicit Discharge Detection and Elimination (Field)	Post-Construction Stormwater Management (Field)
	9:00 am -12:00 pm	Pollution Prevention & Good Housekeeping (Field)	
	12:00 pm - 1:00 pm	Lunch Break	
	1:00 pm - 3:00 pm	Pollution Prevention & Good Housekeeping (Field)	Post-Construction Stormwater Management (Field)
	3:00 pm - TBD	Travel to Hollidaysburg Office	

⁵ Open Period – This time slot will be used as necessary for follow-up activities, additional discussion, or records reviews.

Agenda for MS4 Program Inspection
Pennsylvania Department of Transportation (PennDOT) –
District 9 (Hollidaysburg Office Meeting Location)
 August 3–August 4, 2011
 EPA Inspection Team 1

Day	Time	Team A (Luz) Program/Agenda Item	Team B (Scott) Program/Agenda Item
Wednesday, August 3, 2011	8:00 am - 9:00 am	Kick-off Meeting & Program Management Overview	
	9:00 am - 10:15 am	Illicit Discharge Detection and Elimination (Office)	
	10:15 am - 12:00 pm	Pollution Prevention & Good Housekeeping (Office)	
	12:00 pm - 1:00 pm	Lunch Break	
	1:00 pm - 2:30 pm	Pollution Prevention & Good Housekeeping (Field)	Post-Construction Stormwater Management (Office)
	2:30 pm - 4:30 pm		Open Period for Additional Activities ¹ (Tentative time slot)
	4:30 pm - 5:00 pm	Recap and Logistics Planning for Thursday	
Thursday, August 4, 2011	8:00 am - 9:00 am	Illicit Discharge Detection and Elimination (Field)	Post-Construction Stormwater Management (Field)
	9:00 am - 12:00 pm	Pollution Prevention & Good Housekeeping (Field)	
	12:00 pm - 1:00 pm	Lunch Break	
	1:00 pm - 3:00 pm	Pollution Prevention & Good Housekeeping (Field)	Post-Construction Stormwater Management (Field)
	3:00 pm - TBD	Travel to Central Office for Closing Conference on Friday	

¹ Open Period – This time slot will be used as necessary for follow-up activities, additional discussion, or records reviews.

Agenda for MS4 Program Inspection
Pennsylvania Department of Transportation (PennDOT) –
District 1 (Waterford Office Meeting Location)
August 1–August 2, 2011
EPA Inspection Team 2

Day	Time	Team A (Pieter) Program/Agenda Item	Team B (Max) Program/Agenda Item
Monday, August 1, 2011	8:00 am - 9:00 am	Kick-off Meeting & Program Management Overview	
	9:00 am - 10:15 am	Illicit Discharge Detection and Elimination (Office)	
	10:15 am - 12:00 pm	Pollution Prevention & Good Housekeeping (Office)	
	12:00 pm - 1:00 pm	Lunch Break	
	1:00 pm - 2:30 pm	Pollution Prevention & Good Housekeeping (Field)	Post-Construction Stormwater Management (Office)
	2:30 pm - 4:30 pm		Open Period for Additional Activities ² (Tentative time slot)
	4:30 pm - 5:00 pm	Recap and Logistics Planning for Tuesday	
Tuesday, August 2, 2011	8:00 am - 9:00 am	Illicit Discharge Detection and Elimination (Field)	Post-Construction Stormwater Management (Field)
	9:00 am -12:00 pm	Pollution Prevention & Good Housekeeping (Field)	
	12:00 pm - 1:00 pm	Lunch Break	
	1:00 pm - 3:00 pm	Pollution Prevention & Good Housekeeping (Field)	Post-Construction Stormwater Management (Field)
	3:00 pm - TBD	Travel to Bridgeville Office	

² Open Period – This time slot will be used as necessary for follow-up activities, additional discussion, or records reviews.

Agenda for MS4 Program Inspection
Pennsylvania Department of Transportation (PennDOT) –
District 11 (Bridgeville Office Meeting Location)
August 3–August 4, 2011
EPA Inspection Team 2

Day	Time	Team A (Pieter) Program/Agenda Item	Team B (Max) Program/Agenda Item
Wednesday, August 3, 2011	8:00 am - 9:00 am	Kick-off Meeting & Program Management Overview	
	9:00 am - 10:15 am	Illicit Discharge Detection and Elimination (Office)	
	10:15 am - 12:00 pm	Pollution Prevention & Good Housekeeping (Office)	
	12:00 pm - 1:00 pm	Lunch Break	
	1:00 pm - 2:30 pm	Pollution Prevention & Good Housekeeping (Field)	Post-Construction Stormwater Management (Office)
	2:30 pm - 4:30 pm		Open Period for Additional Activities ³ (Tentative time slot)
	4:30 pm - 5:00 pm	Recap and Logistics Planning for Thursday	
Thursday, August 4, 2011	8:00 am - 9:00 am	Illicit Discharge Detection and Elimination (Field)	Post-Construction Stormwater Management (Field)
	9:00 am - 12:00 pm	Pollution Prevention & Good Housekeeping (Field)	
	12:00 pm - 1:00 pm	Lunch Break	
	1:00 pm - 3:00 pm	Pollution Prevention & Good Housekeeping (Field)	Post-Construction Stormwater Management (Field)
	3:00 pm - TBD	Travel to Central Office for Closing Conference on Friday	

³ Open Period – This time slot will be used as necessary for follow-up activities, additional discussion, or records reviews.

Agenda for MS4 Program Inspection
Pennsylvania Department of Transportation (PennDOT) –
Central Office (Harrisburg/Keystone Building Meeting Location)
August 5, 2011
EPA Inspection Teams 1 and 2

Day	Time	Team 1 (Scott) Program/Agenda Item	Team 2 (Max) Program/Agenda Item
Friday, August 5, 2011	8:00 am - 9:30 am	Closing Conference ⁴ (Tentative time slot)	

⁴ PennDOT is encouraged to invite representatives from all applicable organizational divisions/departments to the Closing Conference.

**ATTACHMENT TO THE FILE -
Comments from PennDOT on The Inspection Report**

**COMMENTS ON EPA INSPECTION
CONDUCTED IN AUGUST OF 2011**

A. Comments on the Illicit Discharge and Detection (IDD) MCM

1. PennDOT has developed a new policy which was initially approved on July 24, 2012. The policy was revised on October 22, 2012, to provide greater guidance on reporting and documenting potential illicit discharges when detected. This policy is in the process of being added to Publication 23, Chapter 8 and will be added to Publication 73. Training has been provided to the STAMPP program personnel on May 22, 2012 and will be provided each spring. Training was also provided on IDD specifically and PennDOT's MS4 permit generally to PennDOT personnel on March 15, 2012 and April 7, 2012.
2. In the inspections of the maintenance facilities, the report lists as a deficiency the absence of a detailed plan/map of the pipes and outlets at the facilities. The mapping requirements under PennDOT's 2005 permit requires the mapping of outfalls of PennDOT's MS4 that flow directly to lakes, streams, rivers and their tributaries as shown on a USGS 7.5 minute quadrangle map. . . . See page 13 of the permit under "Storm Sewer System Mapping". The permit defines "outfall" as: "A 'Point Source' at the point where an MS4 discharges to surface water of the Commonwealth; this does not include open conveyances connecting two municipal separate storm sewers, or pipes, tunnels or other conveyances which connect segments of the same stream or other surface waters and are used to convey surface waters". See page 7 of the permit. PennDOT's permit is consistent with the regulations defining what the MS4 permit will require. Section 122.34 (a)(3)(i) requires a map of the outfalls and receiving waters. Section 122.26(b)(9) defines "outfall" the same as the definition in PennDOT's permit. The mapping of all pipes and outlets in PennDOT's MS4 is not required under the permit or the regulations - only the mapping of outfalls is required. PennDOT does have the pipe and outlet information for its roadways and will provide the information in its present form to PaDEP during the present permit term even though not required by the 2005 or current permits.
3. PennDOT did identify a priority list in 2006 which consisted of 32 MS4 outfall monitoring sites located at PennDOT's stockpile facilities throughout the 11 PennDOT Districts. The same list was used each year for the permit term. The permit does not prohibit using the same list each year.
4. The inspection report notes that the IDD inspections for priority areas and for the inspection of the MS4 system (25% per year) were not documented. These inspections were documented in Roadway Management System (RMS). Moreover, Part D.3 of PennDOT's permit only requires documentation if an illicit discharge is detected. See pages 13 and 14, item 3, Remove or Correct Illicit Discharge.
5. Under Observation 4 of the inspection report on page 9, a quote is taken out of context giving the impression that sampling by collecting the discharge in a container is required

if a dry-weather flow is detected. Page 13 of the permit provides the procedure if a dry weather flow is identified during a field screening. The "sampling" required under PennDOT's MS4 permit to identify the discharge is based on observations (visual or olfaction). PennDOT's permit requires the following dry-weather flow analysis: (1) visual observations of color, turbidity, sheen/scum, steady or intermittent flow, presence of garbage or sewage, and condition of vegetation and (2) observations of odor.

6. Under Observation 5 of the inspection report on page 11, a quote is taken out of context giving the impression that PennDOT is responsible for the removal of illicit discharges. Pages 14 and 15 of PennDOT's permit provides that PennDOT will inform the local DEP regional office upon the discovery of an illicit discharge for appropriate action. The permit does not require PennDOT to remove illicit discharges.

B. Comments on the Post Construction Stormwater Controls MCM

1. PennDOT disagrees with the statement: "Although the PCSM plans were developed by the district design staff, the plans were not provided to the district maintenance units . . . ; therefore, at the time of the inspection, there was no evidence that the plans were being implemented and the BMPs were being maintained in accordance with the PCSM plans." PennDOT's MS4 permit provides: "Ensure that post-construction BMPs are implemented, operated, and maintained." There is no reference to a PCSM plans in the permit. Therefore, just because a PCSM plan may not have been available does not indicate a lack of evidence that the BMPs were being operated and maintained.
2. PennDOT's permit does not require stormwater BMPs to be inventoried.
3. Catch basins inspected in District 1 are not Stormwater BMPs, rather they are drainage facilities. The basin within the curbing (the street) is within PennDOT's regulated MS4 if within an urbanized area. The basin outside the curbing is part of the municipality's MS4. EPA's inspection is a snapshot in time, and therefore, the findings do not necessarily show that the drainage facilities are not being maintained. PennDOT's catch basins are monitored and cleaned out as necessary on a semi-annual basis. The issues regarding debris accumulation would have been addressed during its next scheduled rotation.

C. Comments on the Good Housekeeping MCM and individual facility reports

1. Reference is made in almost every Facility Report to staining of impervious surfaces with petroleum or oily substances from leaking vehicles. These observations are not inconsistent with the good housekeeping measure in MCM#5 of PennDOT's permit. The permit provides for "the placement of leaking vehicles on impervious pads or place drip pan under leaking vehicles". Vehicles are placed on impervious surfaces and the stains are evidence that this provision in the permit was followed.
2. Reference is made in almost every Facility Report that areas where staining occurred do not show evidence of clean-up or response to spill. PennDOT's permit requires

PennDOT to have “guidelines and protocols for spill cleanup”. Those guidelines are found in the facility’s combined facilities response plans (CFRPs) and general guidance in Publication 611, Section 8.2.

3. A number of the facility reports address the storage of sand, fill, aggregate, cold patch, antiskid and other materials not considered de-icing materials. PennDOT’s permit does not specifically address the storage of sand, fill, aggregate, cold patch, and antiskid materials. The permit addresses the storage of de-icing materials and these materials are not de-icing materials. Therefore, the storage practices of these materials at PennDOT’s facilities are not inconsistent with the permit.
4. A number of facility reports question where drains to vehicle washing areas outlet and question the absence of BMPs at washing areas. PennDOT’s permit addresses vehicle washing areas separate from vehicle maintenance facilities and provides “creating designated washing areas, reviewing the use of commercial washing stalls, reviewing washing detergents for phosphates” According to PennDOT’s MSDS-Pro database, the solvents used to clean vehicles (the Savvy QuickSolv Gum and Tar Remover and the Savvy TR-43, Vehicle Cleaner) does not contain phosphates which is consistent with PennDOT’s permit. The requirement in the permit to plug floor drains not connected to a sanitary sewer does not apply to vehicle washing areas. Second, the language in the permit does not require wash water containment BMPs. The washing areas are consistent with the permit.
5. The following five (5) facilities that were inspected were located outside of urbanized areas at the time of the inspection, and therefore, were not subject to PennDOT’s MS4 Permit:
 - The Crawford County Maintenance Facilities (Report #s 1 and 14);
 - The Centre County Maintenance Facility (Report #2);
 - The Cumberland County Maintenance Facility (Report #9); and
 - The Erie County Maintenance Facility (Report #15)

***Facility Visit Report No. 1 Crawford County Maintenance Facility
(Meadville Maintenance Facility)***

- This facility is not located in an urbanized area as defined by either the 2000 or 2010 Census. This conclusion was reached using DEP’s eMAP pa tool. Therefore, this facility is not subject to PennDOT’s MS4 Permit.
- With regard to the references to oil stains and historic staining, see general comments 1 and 2 of this Section. PennDOT’s permit does not specifically address the storage of aggregate and fill materials. The permit addresses the storage of de-icing materials and these materials are not de-icing materials. Therefore, the storage of these materials at this facility is not inconsistent with the permit.

***Facility Visit Report No. 2 Centre County Maintenance Facility
(Bellefonte Maintenance Facility)***

- This facility is not located in an urbanized area as defined by either the 2000 or 2010 Census. This conclusion was reached using DEP's eMAP pa tool. Therefore, this facility is not subject to PennDOT's MS4 Permit.
- The floor drains to the equipment maintenance garage in all maintenance 01 facilities, including this facility are connected to public sanitary systems. See also comment 2 on page 1.

***Facility Visit Report No. 3 Lancaster County Maintenance Facility
(Lancaster Maintenance Facility)***

- With regard to the references to oil stains and historic staining, see general comments 1 and 2 in this Section.
- The floor drains to the equipment maintenance garage in all maintenance 01 facilities, including this facility, are connected to public sanitary systems. See also comment 2 on page 1.
- PennDOT's permit does not specifically address the storage of aggregate and fill materials. The permit addresses the storage of de-icing materials and these materials are not de-icing materials. Therefore, the storage of these materials at this facility is not inconsistent with the permit.

***Facility Visit Report No. 4 Allegheny County Maintenance Facility
(Aspinwall Maintenance Facility)***

- The floor drains to the equipment maintenance garage in all maintenance 01 facilities, including this facility, are connected to public sanitary systems. See also comment 2 on page 1. The one sink at this facility which was discovered not to be connected to the sanitary sewer system was removed within a week of the inspection.
- With regard to the references to oil stains and historic staining, see general comments 1 and 2 in this Section.

***Facility Visit Report No. 5 Dauphin County Maintenance Facility
(Herr Street Maintenance Facility)***

- The floor drains to the equipment maintenance garage in all maintenance 01 facilities, including this facility, are connected to public sanitary systems. See also comment 2 on page 1.
- With regard to the references to oil stains and historic staining, see general comments 1 and 2 in this Section.
- Neither the permit nor Chapter 12 of Publication 23 requires oil-water separators.

***Facility Visit Report No. 6 York County Maintenance Facility
(York Maintenance Facility)***

- With regard to vehicle washing areas, see comment 4 on page 3.
- According to the MSDS-Pro, neither the Savvy QuickSolv Gum and Tar Remover nor the Savvy TR-43, Vehicle Cleaner contain phosphates. These cleaners are consistent with our permit.
- With regard to references to oil stains, see general comments 1 and 2 in this section.

***Facility Visit Report No. 7 Blair County Maintenance Facility
(Hollidaysburg Maintenance Facility)***

- With regard to vehicle washing areas, see comment 4 on page 3.
- PennDOT's permit does not specifically address the storage of antiskid material. The permit addresses the storage of de-icing materials and antiskid is not a de-icing material. Therefore, the storage of antiskid material at this facility is not inconsistent with the permit.
- With regard to the references to oil stains, see general comments 1 and 2 in this Section.

***Facility Visit Report No. 8 Beaver County Maintenance Facility
(Rochester Maintenance Facility)***

- With regard to vehicle washing areas, see comment 4 on page 3.
- With regard to the references to oil stains and historic staining, see general comments 1 and 2 in this Section.

***Facility Visit Report No. 9 Cumberland County Maintenance Facility
(Carlisle Maintenance Facility)***

- This location was not in a designated urbanized area based on the 2000 Census. This area was determined to be urbanized area based on the 2010 Census. This area was not determined to be an urbanized area at the time of the inspection. This conclusion was reached using DEP's eMAPpa tool. According to PaDEP, the urbanized areas covered by PennDOT's 2005 and present permit is based on the 2000 Census.
- With regard to vehicle washing areas, see comment 4 on page 3.
- This facility is no longer in operation.

***Facility Visit Report No. 10 Cumberland County Maintenance Facility
(Lemoyne Stockpile)***

- The washing area was consistent with the permit. The permit provides for "creating designated washing areas, reviewing the use of commercial washing stalls, reviewing washing detergents for phosphates". The permit does not require wash water containment BMPs.
- With regard to the references to oil stains and historic staining, see general comments 1 and 2 in this Section.

- The open valve to the de-icing material was an oversight which was been corrected.

***Facility Visit Report No. 11 Allegheny County Maintenance Facility
(Bridgeville Stockpile)***

- The very small area of exposed salt that was not tarped was an oversight- likely the result of wind and has been tarped.
- With regard to vehicle washing areas, see comment 4 on page 3.
- With regard to the references to oil stains and historic staining, see general comments 1 and 2 in this Section.

***Facility Visit Report No. 12 Dauphin County Maintenance Facility
(Stockpile No. 12)***

- PennDOT's permit does not specifically address the storage of sand, cold patch, and antiskid material. The permit addresses the storage of de-icing materials and these materials are not de-icing materials. Therefore, the storage of these materials at this facility is not inconsistent with the permit.
- No evidence indicating that the paint spill, when it occurred, was not handled properly.
- Permit does not address the storage of empty drums.

***Facility Visit Report No. 13 Cambria County Maintenance Facility
(St. Clair Maintenance Facility)***

- PennDOT's permit does not specifically address the storage of aggregate material and mixed media material. The permit addresses the storage of de-icing materials and these materials are not de-icing materials. Therefore, the storage of these materials at this facility is not inconsistent with the permit.

***Facility Visit Report No. 14 Crawford County Maintenance Facility
(Centerville Maintenance Facility)***

- This facility is not located in an urbanized area as defined by either the 2000 or 2010 Census. This conclusion was reached using DEP's eMAPpa tool. Therefore, this facility is not subject to PennDOT's MS4 Permit.
- The washing area was consistent with the permit. The permit provides for "creating designated washing areas, reviewing the use of commercial washing stalls, reviewing washing detergents for phosphates". The permit does not require wash water containment BMPs.
- With regard to the references to oil stains and historic staining, see general comments 1 and 2 in this Section.

***Facility Visit Report No. 15 Erie County Maintenance Facility
(Erie Maintenance Facility)***

- This location was not in a designated urbanized area based on the 2000 Census. This area may be located in an urbanized area based on the 2010 Census. This area was not determined to be an urbanized area at the time of the inspection. This conclusion was reached using DEP's eMAP pa tool. According to PaDEP, the urbanized areas covered by PennDOT's 2005 and present permit is based on the 2000 Census.

***Facility Visit Report No. 16 York County Maintenance Facility
(York County Stockpile)***

- As indicated in the photographs, salt was stored 10' from doorway consistent with the policy in Chapter 12 of Publication 23.
- With regard to the references to oil stains and historic staining, see general comments 1 and 2 in this Section.

***Facility Visit Report No. 17 Cambria County Maintenance Facility
(Richland Stockpile)***

- PennDOT's permit does not specifically address the storage of antiskid and slag material. The permit addresses the storage of de-icing materials and these materials are not de-icing materials. Therefore, the storage of these materials at this facility is not inconsistent with the permit.
- With regard to the references to oil stains and historic staining, see general comments 1 and 2 in this Section.

***Facility Visit Report No. 18 Erie County Maintenance Facility
(Erie Stockpile)***

- PennDOT's permit does not specifically address the storage of antiskid and slag material. The permit addresses the storage of de-icing materials and these materials are not de-icing materials. Therefore, the storage of these materials at this facility is not inconsistent with the permit.
- With regard to the references to oil stains and historic staining, see general comments 1 and 2 in this Section.